Response to Restriction Requirement
U.S. Patent Application Serial No. 10/626,229 **PATENT**
Office Action Dated: December 19, 2005
Inventor: Reubi, Jean Claude
Attorney Docket No. 46639-57991

Amendment of the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1. (Withdrawn): A method of detecting and localizing malignant tumours or their metastases in tissues, which in healthy condition do not contain substantial quantities of CCK-receptors, in the body of a human being, which comprises (i) administering to said human being a composition comprising, in a quantity sufficient for external imaging, a peptide of the general formula H - $(Xaa)_n$- $(Xbb)_m$ - Tyr - Xcc — Gly - Trp - Xdd —Asp - Phe - R_2 (I) [[5]] (SEQ ID NO:27) or an acid amide thereof, formed between a free NH_2-group of an amino acid moiety and R_1COOH, wherein R_1 is a (C_1-C_3)alkanoyl group, an arylcarbonyl group, or an aryl-(C_1-C_3)alkanoyl group; or a lactam thereof, formed between a free NH_2 group of an amino acid moiety and a free CO_2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; wherein:

$(Xaa)_n$ stands for 0 to 25 amino acid moieties which are equal or different and are selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His, Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Trp, Val and Phe;

m =0 or 1;

Xbb is Asp, Dpr, Glu or Pyr; with the proviso that Xbb can only be Pyr when n = 0;

Xcc is Met, Leu or Nle;

Xdd is Met, Leu or Nle; and

R_2 is a hydroxy group, an acetoxy group or an amino group;

wherein one or more of the amino acids of said peptide can be in the D-configuration and wherein said peptide may comprise pseudo peptide bonds;. said peptide being labelled with (a) a radioactive metal isotope selected from the group consisting of ^{99m}Tc, ^{203}Pb, ^{67}Ga, ^{68}Ga, ^{72}As, ^{111}In, ^{113m}In, ^{97}Ru, ^{62}Cu, ^{64}Cu, ^{52}Fe, ^{52m}Mn and ^{51}Cr, or (b) with a paramagnetic metal atom selected from the group consisting of Cr, Mn, Fe, Co, Ni, Cu, Pr, Nd, Sm, Yb, Gd, Tb, Dy, Ho and Er, or (c) with a radioactive halogen isotope, selected from ^{123}I, ^{124}I, ^{125}I, ^{131}I, ^{75}Br, ^{76}Br, ^{77}Br and ^{82}Br, and thereupon (ii) subjecting said human being to external imaging, by radioactive scanning or by magnetic resonance imaging, to determine the targeted sites in the body of said human being in relation to the background activity, in order to allow detection and localization of said tumours in the body.

2. (Withdrawn): A method of detecting and localizing malignant tumours or their metastases in tissues, which in healthy condition do not contain substantial quantities of CCK-receptors, in the body of a human being, which comprises (i) administering to said human being a composition comprising, in a quantity sufficient for detection by a gamma detecting probe, a peptide of the general formula H - $(Xaa)_n$ $(Xbb)_m$ - Tyr - Xcc — Gly - Trp - Xdd — Asp - Phe – $R_2(I)$ (SEQ ID NO:27) or an acid amide thereof, formed between a free NH_2-group of an amino acid moiety and R_1COOH; or a lactam thereof, formed between a free NH_2 group of an amino acid moiety and a free CO_2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; wherein $R_1$is a $(C_1$-$C_3)$alkanoyl group, an arylcarbonyl group, or an aryl-$(C_1$-$C_3)$alkanoyl group; $(Xaa)_n$ stands for 0 to 25 amino acid moieties which are equal or different and

are selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His. Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Trp, Val and Phe;

m=0 or 1;

Xbb is Asp, Dpr, Glu or Pyr; with the proviso that Xbb can only be Pyr when n =0;

Xcc is Met, Leu or Nle;

Xdd is Met, Leu or Nle; and

R_2 is a hydroxy group, an acetoxy group or an amino group;

wherein one or more of the amino acids of said peptide can be in the D-configuration and wherein said peptide may comprise pseudo peptide bonds; said peptide being labelled with ^{161}Tb, ^{123}I, ^{125}I, ^{99m}Tc, ^{67}Ga, ^{68}Ga, ^{72}As, ^{111}In, ^{113m}In, ^{62}Cu, ^{64}Cu, ^{52}Fe, ^{52m}Mn or ^{51}Cr and thereupon (ii), after allowing the active substance to be bound and taken up in said tumours and after blood clearance of radioactivity, subjecting said human being to a radioimmunodetection technique in the relevant area of the body of said human being, by using a gamma detecting probe.

3. (Withdrawn): A method for the therapeutic treatment of malignant tumours that express CCK-receptor or their metastases in tissues, which in healthy condition do not contain substantial quantities of CCK-receptors, in the body of a human being, which comprises administering to said human being a composition comprising, in a quantity effective for combating or controlling tumours, a peptide of the general formula H-$(Xaa)_n$ $(Xbb)_m$ - Tyr - Xcc — Gly - Trp - Xdd —Asp - Phe - R_2(I) (SEQ ID NO:27) or an acid amide thereof, formed between a free NH_2-group of an amino acid moiety and R_1COOH; or a lactam thereof, formed

between a free NH_2 group of an amino acid moiety and a free CO_2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; wherein,

R_1 is a C_1-C_3)alkanoyl group, an arylcarbonyl group, or an aryl-(C_1-C_3)alkanoyl group;

$(Xaa)_n$ stands for 0 to 25 amino acid moieties which are equal or different and are selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His, Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Trp, Val and Phe;

m =0 or 1;

Xbb is Asp, Dpr. Glu or Pyr; with the proviso that Xbb can only be Pyr when n = 0;

Xcc is Met, Leu or Nle;

Xdd is Met, Leu or Nle; and

R_2 is a hydroxy group, an acetoxy group or an amino group

said peptide being labelled with an isotope selected from the group consisting of ^{186}Re, ^{188}Re, ^{77}As, ^{90}Y, ^{67}Cu, ^{169}Er, ^{121}Sn, ^{127}Te, ^{142}Pr, ^{143}Pr, ^{198}Au, ^{199}Au, ^{161}Tb, ^{109}Pd, ^{165}Dy, ^{149}Pm, ^{151}Pm, ^{153}Sm, ^{157}Gd, ^{159}Gd, ^{166}Ho, ^{172}Tm ^{169}Yb, ^{175}Yb ^{177}Lu, ^{105}Rh, ^{111}Ag, ^{125}I, ^{131}I and ^{82}Br.

4. (Cancelled).

5. (Cancelled).

6. (Withdrawn): The method of Claims 1, 2, or 3, wherein said peptide is selected from the group consisting of H-DTyr-Gly—Asp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID

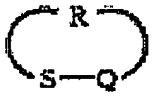
NO:11), H-Asp-Tyr-Met-Gly-Trp-Met-Asp-Phe-NH_2 (SEQ ID No: 2), H-Asp-Tyr-Nle-Asp—Phe-NH_2 (SEQ ID NO:3), H-DAsp-Phe-NH_2 (SEQ ID NO:5) and H-Dpr-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:6).

7. (Withdrawn): The method of Claim 1 wherein said peptide is labelled with a radioactive halogen isotope selected from the group consisting of ^{123}I, ^{124}I, ^{125}I, ^{131}I, ^{75}Br, ^{76}Br, ^{77}Br and ^{82}Br, said radioactive halogen isotope being attached to a Tyr or Trp moiety of the peptide, or to the aryl group of substituent R_1.

8. (Withdrawn): The method of Claim 1 wherein said radioactive meal isotope or said paramagnetic metal atom is attached to the peptide by means of chelating group chelating said isotope or atom, which chelating group is bound by an amide bond or through a spacing group to the peptide molecule.

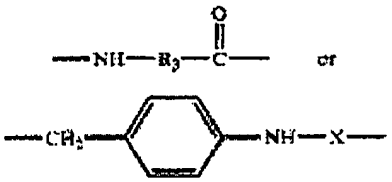
9. (Withdrawn): The method of Claim 8, wherein said composition comprises a peptide labelled with a metal atom, chelated by an $N_tS_{(4-t)}$ tetradentate chelating agent, wherein t=2-4, or by a chelating group comprising ethylene diamine tetra-acetic acid (EDTA), diethylene triamine penta-acetic acid (DTPA), cyclohexyl 1,2-diamine tetra-acetic acid (CDTA), ethyleneglycol-O,O' -bis(2-aminoethyl)-N,N,N',N' -tetraacetic acid (EGTA), N,N-bis(hydroxybenzyl)-ethylenediamine-N,N'-diacetic acid (HBED), triethylene tetramine hexa-acetic acid (TTHA), 1,4,7,10-tetraazacyclododecane-N,N'',N' ',N''' '-tetra-acetic acid (DOTA),

hydroxyethyldiamine triacetic acid (HEDTA), 1,4,8,11 -tetra-azacyclotetradecane-N,N' ,N' ',N' ''-tetra-acetic acid (TETA), or a compound of the general formula



(II)

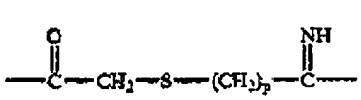
wherein S is sulfur, R is a branched or non-branched, optionally substituted hydrocarbyl radical, which may be interrupted by one or more hetero-atoms selected from N, O and S and/or by one or more NH groups, and Q is a group which is capable of reacting with an amino group of the peptide and which is selected from the group consisting of carbonyl, carbimidoyl, N- (C_1-C_6)alkylcarbimidoyl, N-hydroxycarbimidoyl and N-(C_1-C_6)alkoxycarbimidoyl; and wherein said optionally present spacing group is a biotinyl moiety or has the general formula



(III)

(IV)

wherein R_3 is a C_1-C_{10} alkylene group, a C_1-C_{10} alkylidene group or a C_2-C_{10} alkenylene group, and X is a thiocarbonyl group or a group of the general formula



(V)

wherein p is 1-5.

10. (Cancelled).

11. (Cancelled).

12. (Currently amended): A pharmaceutical composition comprising, in addition to a pharmaceutically acceptable carrier material and, if desired, at least one pharmaceutically acceptable adjuvant, as the active substance, in a quantity sufficient for external imaging, or detection by a gamma detecting probe or for combating or controlling tumours, a peptide of the general formula H - $(Xaa)_n$ - $(Xbb)_m$ - Tyr - Xcc — Gly - Trp - Xdd —Asp - Phe - R_2(I) (SEQ ID NO:27) or an acid amide thereof, formed between a free NH_2-group of an amino acid moiety and R_1COOH; or a lactam thereof, formed between a free NH_2 group of an amino acid moiety and a free CO_2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; wherein

R_1 is a $(C_1$-$C_3)$alkanoyl group, an arylcarbonyl group, or an aryl-$(C_1$-$C_3)$ alkanoyl group;

$(Xaa)_n$ stands for 0 to 25 amino acid moieties which are equal or different and are selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His, Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Trp, Val and Phe;

m =0 or 1:

Xbb is Asp, Dpr, Glu or Pyr; with the proviso that Xbb can only be Pyr when n =0;

Xcc is Met, Leu or Nle;

Xdd is Met, Leu or Nle; and

R2 is a hydroxy group, an acetoxy group or an amino group;

wherein one or more of the amino acids of said peptide can be in the D-configuration and wherein said peptide may comprise pseudo peptide bonds said peptide being labelled with (a) a radioactive metal isotope that is ~~selected from the group consisting of ^{99m}Tc, ^{203}Pb, ^{66}Ga, ^{67}Ga, ^{68}Ga, ^{72}As, ^{111}In ^{113m}In, ^{114m}In, ^{97}Ru, ^{62}Cu, ^{64}Cu, ^{52}Fe, ^{52m}Mn, ^{51}Cr, ^{186}Re, ^{188}Re, ^{77}As, ^{90}Y, ^{67}Cu, ^{169}Er, ^{117m}Sn, ^{121}Sn, ^{127}Te, ^{142}Pr, ^{143}Pr, ^{198}Au, ^{199}Au, ^{149}Tb, ^{161}Tb, ^{109}Pd, ^{165}Dy, ^{149}Pm, ^{151}Pm, ^{153}Sm, ^{157}Gd, ^{159}Gd, ^{166}Ho, ^{172}Tm, ^{169}Yb, ^{175}Yb, ^{177}Lu, ^{105}Rh and ^{111}Ag~~, or (b) with a paramagnetic metal atom that is ~~selected from the group consisting of Cr, Mn, Fe, Co, Ni, Cu, Pr, Nd, Sm, Yb~~, Gd, ~~Tb, Dy, Ho and Er,~~ or (c) with a radioactive halogen isotope that is ~~, selected from ^{123}I, ^{124}I, ^{125}I , ^{131}I, ^{75}Br, ^{76}Br, ^{77}Br and ^{82}Br~~.

13. (Currently amended): The composition of Claim 12, wherein said active substance is a derivatized peptide that is ~~selected from the group consisting of DTPA-Asp-Tyr-Met-Gly-Trp-Met-Asp-Phe-NH_2 (SEQ ID NO: 19), DTPA-Asp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:20),~~ DTPA-DAsp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:21) ~~, DTPA-DAsp-Tyr-Met-Gly-Trp-Met-Asp-Phe-NH_2 (SEQ ID NO:22) and Dpr(β-DTPA)-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID N0:23)~~, wherein said derivatized peptide is labelled with a

metal isotope or atom attached to the peptide by means of a chelating group chelating said isotope or atom, wherein said ~~which~~ chelating group is bound by an amide bond or through a spacing group to the peptide molecule.

14. (Currently Amended): The composition of Claim 13, wherein said derivatized peptide is ~~DTPA-Asp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:20) or~~ DTPA-DAsp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_7 (SEQ ID NO:21)

15. (Cancelled).

16. (Cancelled).

17. (Cancelled).

18. (Cancelled).

19. (Cancelled).

20. (Cancelled).

21. (Cancelled).

22. (Cancelled).

23. (Withdrawn): The method of Claim 2 wherein said ^{161}Tb, ^{99m}Tc, ^{67}Ga, ^{68}Ga, ^{72}As, ^{111}In, ^{113m}In, ^{62}Cu, ^{64}Cu, ^{52}Fe, ^{52m}Mn or ^{51}Cr is attached to the peptide by means of a chelating group chelating said ^{161}Tb, ^{99m}TC ^{67}Ga, ^{68}Ga, ^{72}As, ^{111}In, ^{113m}In, ^{62}Cu, ^{64}Cu, ^{52}Fe, ^{52m}Mn or ^{51}Cr which chelating group is bound by an amide bond or through a spacing group to the peptide molecule.

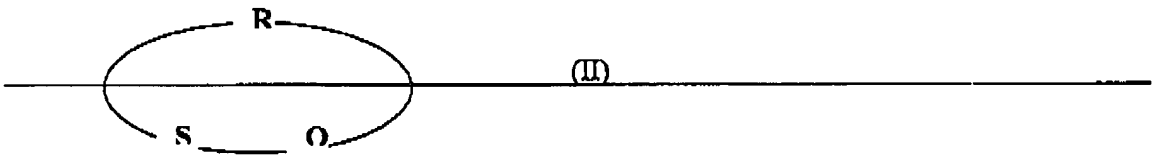
24. (Withdrawn): The method of Claim 3 wherein said isotope is attached to the peptide by means of a chelating group chelating said isotope, which chelating group is bound by an amide bond or through a spacing group to the peptide molecule.

25. (Withdrawn): A pharmaceutical composition comprising, in addition to a pharmaceutically acceptable carrier material and, optionally, at least one pharmaceutically acceptable adjuvant, as the active substance, in a quantity sufficient for detecting and localizing malignant tumours, a peptide selected from the group consisting of [^{125}I-D-Tyr]-Gly-Asp-Tyr-Nle-Gly-Trp-Nle-Asp- Phe-NH2 (SEQ ID NO:13) and D-Tyr-Gly-Asp-[^{125}I-Tyr]-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:14).

26. (Cancelled).

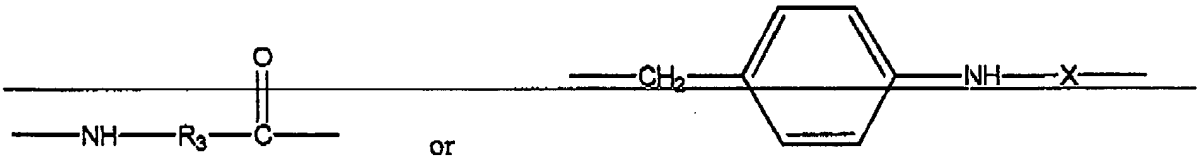
27. (Currently amended): The labelled peptide of Claim 12 ~~claim 26~~ wherein said metal isotope or said metal atom is attached to the peptide by means of a chelating group chelating said metal isotope or said metal atom, wherein said ~~which~~ chelating group is bound by an amide bond or through a spacing group to the peptide molecule.

28. (Currently amended): The labelled peptide of Claim 12 ~~claim 26~~ wherein said metal isotope or said metal atom is attached to the peptide by means of a chelating group chelating said metal isotope or said metal atom, wherein said chelating group is ~~a tetradentate chelating agent or comprises ethylene diamine tetra acetic acid (EDTA), diethylene triamine penta acetic acid (DTPA), cyclohexyl 1,2 diamine tetra acetic acid (CDTA), ethyleneglycol O,O'-bis (2-aminoethyl) N,N,N',N'-tetraacetic acid (EGTA), N,N bis(hydroxybenzyl) ethylenediamine N,N'-diacetic acid (HBED), triethylene tetramine hexa acetic acid (TTHA),~~ 1,4,7,10-tetraazacyclododecane-N,N',N''-tetra-acetic acid (DOTA)~~, hydroxyethyldiamine triacetic acid (HEDTA), 1,4,8,11 tetra azacyclotetradecane N,N',N'',N''' tetra acetic acid (TETA), substituted EDTA, or from a compound of the general formula~~



(II)

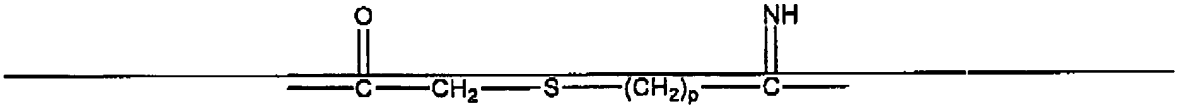
~~wherein S is sulfur, R is a branched or non-branched, optionally substituted hydrocarbyl radical, which may be interrupted by one or more hetero-atoms selected from N, O and S and/or by one or more NH groups, and Q is a peptide and which is selected from the group consisting of carbonyl, carbimidoyl, (C1-C6)alkylcarbimidoyl, N-hydroxycarbimidoyl and N-(C1-C6)alkoxycarbimidoyl; and wherein said optionally present spacing group is a biotinyl moiety or has the general formula~~



or

~~(III)~~ ~~(IV)~~

~~wherein R3 is a C1-C10 alkylene group, a C1-C10-alkylidene group or a C2-C10-alkenylene group, and X is a thiocarbonyl group or a group of the general formula~~



~~(V)~~

~~wherein p is 1-5.~~

29. (Currently amended): The labelled peptide of Claim 12, wherein ~~claim 26 wherein~~ said peptide comprises DTPA and is ~~selected from the group consisting of DTPA-Asp-Tyr-Met-Gly-Trp-Met-Asp-Phe-NH_2 (SEQ ID NO: 19), DTPA-Asp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:20),~~ DTPA-DAsp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:21)~~, DTPA-DAsp-Tyr-Met-Gly-Trp-Met-Asp-Phe-NH_2 (SEQ ID NO:22) and Dpr(ß-DTPA)-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID N0:23)~~.

30. (Currently Amended): The labelled peptide of Claim 12, wherein ~~claim 26 wherein~~ said peptide comprises DTPA and is ~~selected from the group consisting of DTPA-Asp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH2 (SEQ ID NO:20) and~~ DTPA-DAsp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH2 (SEQ ID NO:21).

31. (Previously Presented): A method for preparing a labelled peptide of general formula H - $(Xaa)_n$ - $(Xbb)_m$ - Tyr - Xcc — Gly - Trp - Xdd Asp- Phe - R_2 (I) (SEQ ID NO:27) or an acid amide thereof, formed between a free NH_2-group of an amino acid moiety and R_1COOH, wherein R, is a $(C_1$-$C_3)$alkanoyl group, an arylcarbonyl group, or an aryl-$(C_1$-$C_3)$alkanoyl group; or a lactam thereof, formed between a free NH_2 group of an amino acid moiety and a free CO_2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; wherein:

$(Xaa)_n$ stands for 0 to 25 amino acid moieties which are equal or different and are selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His, Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Trp, Val and Phe;

m = 0 or 1;

Xbb is Asp, Dpr, Glu or Pyr; with the proviso that Xbb can only be Pyr when n =0;

Xcc is Met, Leu or Nle;

Xdd is Met, Leu or Nle; and

R_2 is a hydroxy group, an acetoxy group or an amino group;

wherein one or more of the amino acids of said peptide can be in the D-configuration and wherein said peptide may comprise pseudo peptide bonds; said peptide being labelled with (a) a radioactive metal isotope that is ~~selected from the group consisting of ^{99m}Tc, ^{203}Pb, ^{66}Ga, ^{67}Ga, ^{68}Ga, ^{72}As, ^{111}In, ^{113m}In, ^{114m}In, ^{97}Ru, ^{62}Cu, ^{64}Cu, ^{52}Fe, ^{52m}Mn, ^{51}Cr, ^{186}Re, ^{188}Re, ^{77}As, ^{90}Y, ^{67}Cu, ^{169}Er, ^{117m}Sn, ^{121}Sn, ^{127}Te, ^{142}Pr, ^{143}Pr, ^{198}Au, ^{199}Au, ^{149}Tb, ^{161}Tb, ^{109}Pd, ^{165}Dy, ^{149}Pm, ^{151}Pm, ^{153}Sm, ^{157}Gd, ^{159}Gd, ^{166}Ho, ^{172}Tm, ^{169}Yb, ^{175}Yb, ^{177}Lu, ^{105}Rh and ^{111}Ag~~, or (b) with a paramagnetic metal atom that is ~~selected from the group consisting of Cr, Mn, Fe, Co, Ni, Cu, Pr, Nd, Sm, Yb,~~ Gd~~, Tb, Dy, Ho and Er,~~ or (c) with a radioactive halogen isotope that is ~~, selected from ^{123}I, ^{124}I, ^{125}I ^{131}I, ^{75}Br, ^{76}Br, ^{77}Br and ^{82}Br~~;

wherein said peptide comprises a chelating group bound by an amide bond or through a spacing group to said peptide; said method comprising reacting said peptide with said metal isotope or said metal atom in the form of a salt or of a chelate, bound to a comparatively weak chelator, to form a complex.

32. (Withdrawn): A kit for preparing a radiopharmaceutical composition, comprising (i) a derivatized peptide of general formula H - $(Xaa)_n$- $(Xbb)_m$ - Tyr - Xcc — Gly - Trp - Xdd

— Asp- Phe - R_2 (I) (SEQ ID NO:27) or an acid amide thereof, formed between a free NH_2-group of an amino acid moiety and R_1COOH, wherein R_1 is a $(C_1$-$C_3)$alkanoyl group, an arylcarbonyl group, or an aryl-$(C_1$-$C_3)$alkanoyl group; or a lactam thereof, formed between a free NH_2 group of an amino acid moiety and a free CO_2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; wherein:

$(Xaa)_n$ stands for 0 to 25 amino acid moieties which are equal or different and are selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His, Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Trp, Val and Phe;

m = 0 or 1;

Xbb is Asp, Dpr, Glu or Pyr; with the proviso that Xbb can only be Pyr when n =0;

Xcc is Met, Leu or Nle;

Xdd is Met, Leu or Nle; and

R_2 is a hydroxy group, an acetoxy group or an amino group;

wherein one or more of the amino acids of said peptide can be in the D-configuration and wherein said peptide may comprise pseudo peptide bonds; to which derivatized peptide, if desired, an inert pharmaceutically acceptable carrier and/or formulating agents and/or adjuvants is/are added, (ii) a solution of a salt or chelate of a metal selected from the group consisting of the radioactive isotopes ^{99m}Tc, ^{203}Pb, ^{66}Ga, ^{67}Ga, ^{68}Ga, ^{72}As, ^{111}In, ^{113m}In, ^{114m}In, ^{97}Ru, ^{62}Cu ^{64}Cu, ^{52}Fe, ^{52m}Mn, ^{51}Cr, ^{186}Re, ^{188}Re, ^{77}As, ^{90}Y, ^{67}Cu, ^{169}Er, ^{117m}Sn, ^{121}Sn, ^{127}Te, ^{142}Pr, ^{143}Pr, ^{198}Au, ^{199}Au, ^{149}Tb, ^{161}Tb, ^{109}Pd, ^{165}Dy, ^{149}Pm, ^{151}Pm, ^{153}Sm, ^{157}Gd, ^{159}Gd, ^{166}Ho, ^{172}Tm, ^{169}yb, ^{175}yb,

^{177}Lu, ^{105}Rh and ^{111}Ag, and (iii) instructions for use with a prescription for reacting the ingredients present in the kit.

33. (Withdrawn): A kit for preparing a radiopharmaceutical composition, comprising (i) a derivatized peptide of general formula:

H - $(Xaa)_n$ - $(Xbb)_m$ - Tyr - Xcc — Gly - Trp - Xdd — Asp- Phe – R_2 (I) (SEQ ID NO:27) or an acid amide thereof, formed between a free NH_2-group of an amino acid moiety and R_1COOH, wherein R_1 is a $(C_1$-$C_3)$alkanoyl group, an arylcarbonyl group, or an aryl-$(C_1$-$C_3)$alkanoyl group; or a lactam thereof, formed between a free NH_2 group of an amino acid moiety and a free CO_2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; wherein:

$(Xaa)_n$ stands for 0 to 25 amino acid moieties which are equal or different and are selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His, Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Tip, Val and Phe;

m= 0 or l;

Xbb is Asp, Dpr, Glu or Pyr; with the proviso that Xbb can only be Pyr when n =0;

Xcc is Met, Leu or Nle;

Xdd is Met, Leu or Nle; and

R_2 is a hydroxy group, an acetoxy group or an amino group;

wherein one or more of the amino acids of said peptide can be in the D-configuration and wherein said peptide may comprise pseudo peptide bonds; to which derivatized peptide, if

desired, an inert pharmaceutically acceptable carrier and/or formulating agents and/or adjuvants is/are added, (ii) a reducing agent, and, if desired, a chelator, said ingredients (i) and (ii) optionally being combined, and (iii) instructions for use with a prescription for reacting the ingredients of the kit with ^{99m}Tc in the form of a pertechnetate solution or with ^{186}Re or ^{188}Re in the form of a perrhenate solution.

34. (Withdrawn): The method of Claim 1, 2, or 3, wherein said peptide is selected from the group consisting of H-Asp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:3) and H-DAsp-Tyr-Nle-Gly-Trp-Nle-Asp-Phe-NH_2 (SEQ ID NO:4).

35. (Withdrawn): The method of Claim 2 wherein said peptide is labelled with a radioactive halogen isotope selected from the group consisting of ^{123}I and ^{125}I said radioactive halogen isotope being attached to a Tyr or Trp moiety of the peptide, or to the aryl group of substituent R_1.

36. (Withdrawn): The method of Claim 3 wherein said peptide is labelled with a radioactive halogen isotope selected from the group consisting of ^{125}I, ^{131}I and ^{82}Br, said radioactive halogen isotope being attached to a Tyr or Trp moiety of the peptide, or to the aryl group of substituent R_1.